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EXAMINER

SMITH, RICHARD A

ART UNIT

PAPER NUMBER

2859

DATE MAILED: 04/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/060,052

Applicant(s)

AMIRKHANIAN ET AL.

Examiner

R. Alexander Smith

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4-7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement filed 22 April 2002 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the references numbers 1-12 cited under the section titled "OTHER PRIOR ART" lacks the proper information required by 37 CFR 1.98 (b) (5), i.e., publisher, author (if any), title, relevant pages, date, and place of publication.

The information disclosed in reference numbers 1-12 has been considered by the examiner, but the applicant needs to provide an information disclosure sheet with these references properly listed.

### ***Specification***

2. The specification is objected to because of the following informalities:
  - a. On page 1 and 11, the blank underlined space on each page should be deleted and replaced with --10/059,993--.
  - b. On page 21, the blank underlined space should be deleted and replaced with --60/348,034--.

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*Claim Objections*

3. Claims 1-13 are objected to because of the following informalities:

Claim 1: "a separation channel" in line 5 should be --one of said separation channels-- in order to properly refer to its antecedent.

Claim 2: "a plurality of radiation sources" in line 2 should start with --said-- in order to properly refer to its antecedent.

Claim 3: "between radiation sources" at the end of line 2 is confusing since the pulses with respect to the radiation sources are already disclosed.

Claim 4: "a separation channel" in line 4 should be --one of said separation channels-- in order to properly refer to its antecedent.

Claim 5:

a. "radiation emissions" in line 2 should start with --the-- in order to properly refer to its antecedent.

b. "separation channels" in line 3 should start with --the-- in order to properly refer to its antecedent.

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Claim 6: "radiation emissions" in lines 2-3 should start with --the-- in order to properly refer to its antecedent.

Claim 8: "excitation radiation" in line 2 should start with --said-- in order to properly refer to its antecedent.

Claim 11: "a separation channel" in line 8 should be --one of said separation channels-- in order to properly refer to its antecedent.

Claim 13: "a separation channel" in line 5 should be --one of said separation channels-- in order to properly refer to its antecedent.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 1-7 and 9-13 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. 5,324,401 to Yeung et al.

Yeung et al. discloses a bio-separation instrument comprising a plurality of channels, means for simultaneously separating samples in the separation channels into analytes, and a detection system, said detection system comprising a detection section (50, 55, 60), a plurality of radiation sources (via 15 in figures 2 and 3), excitation means (by laser beam through 15), detecting means (50), control means and the time staggered multiplexed manner (abstract and column 13, lines 11-25); the detection means being a single detector (50); the control means controlling the plural radiation sources to activate in successive pulses between radiation sources (column 13, lines 11-25); the control means controls the synchronization of pulsing and detection rate by accounting for lag time in adjacent channels, whereby detection of a channel covers a period when the associated radiation source is on with respect to the detecting means; the control means controls the detecting means at a rate and period that provides desired signal separation between the channels to reduce cross talk (Example 1 starting in column 15); the control means controls the detecting means and the radiation sources to effect detection in predetermined detection cycles at a frequency to provide a desired detection resolution (column 9, lines 26-49; column 13, line 11 through column 14, line 6; and Example 1 starting in column 15); the control means controls the detecting means and the radiation sources in a manner to effect detection of a repeated scanning manner across the detection zones (column 13, line 11 through column 14, line 6); the analytes comprise a material that fluoresces in the presence of excitation radiation, and the detecting means comprises a means for detecting fluorescence emission (column 5, lines 32-48); the radiation is at least one of fluorescence, chemiluminescence, and phosphorescence (column 6,

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lines 1-3); the separation channel being defined by a capillary column and the means for separating being by electrophoresis (abstract); and the method steps of claim 13 (entire specification and, in particular, the examples starting in column 15).

6. Claims 1-3 and 6-13 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 01/02846 to Melman et al.

Melman et al. discloses a bio-separation instrument comprising a plurality of channels, means for simultaneously separating samples in the separation channels into analytes, and a detection system, said detection system comprising a detection section (figures 1 and 11), a plurality of radiation sources (16), excitation means (by laser, lasers, or LED's), detecting means (15), control means (23) and the time staggered/multiplexed manner (page 7, lines 6-27; page 11, lines 13-17); the detection means being a single detector (22); the control means controlling the plural radiation sources to activate in successive pulses between radiation sources (page 7, lines 6-27; page 8, lines 3-9; page 11, lines 13-17); the control means controls the detecting means and the radiation sources to effect detection in predetermined detection cycles at a frequency to provide a desired detection resolution (page 12, lines 4-10); the control means controls the detecting means and the radiation sources in a manner to effect detection of a repeated scanning manner across the detection zones (page 2, lines 14 through page 3, line 20; page 4, line 13-21; page 12, lines 4-10); the radiation sources produce excitation radiation at more than one wavelength (page 12, line 26 through page 13, line 15); the analytes comprise a material that fluoresces in the presence of excitation radiation, and the detecting means comprises a means for detecting fluorescence emission (page 2, line 14 through page 3, line 2; page 12, lines 4-10);

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the radiation is at least one of fluorescence, chemiluminescence, and phosphorescence; the separation channel being defined by a capillary column and the means for separating being by electrophoresis (abstract); and the method steps of claim 13 (entire specification and, in particular, the method steps claimed by Melman et al., i.e., claims 22-40).

### *Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. The prior art cited in PTO-892 and not mentioned above disclose related detection systems, instruments and methods.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Smith whose telephone number is (703) 305-0647. The examiner can normally be reached on Monday-Friday from 9:00 AM to 5:30 PM.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.



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RAS  
April 11, 2003